Maximum reliability. Minimum fuss.

FIXFAST

Selector Guide

SIKA TROCAL System

Sika

Fastener Systems and Roof Outlets

Contents

Introduction to Fixfast

Fixfast design, manufacture and supply specialist building fasteners and components for the walls and roofs of industrial, commercial and larger residential buildings. We collaborate with major building envelope system manufacturers, such as Sika, to provide them and their clients with engineered fastening and sealing solutions.

This selector guide has been created as an easy to use reference document, identifying the most common fasteners and components for use when installing the Sika Trocal system.

Full technical data for these products along with application uses can be found on our website at www.fixfast.com by searching for the product.
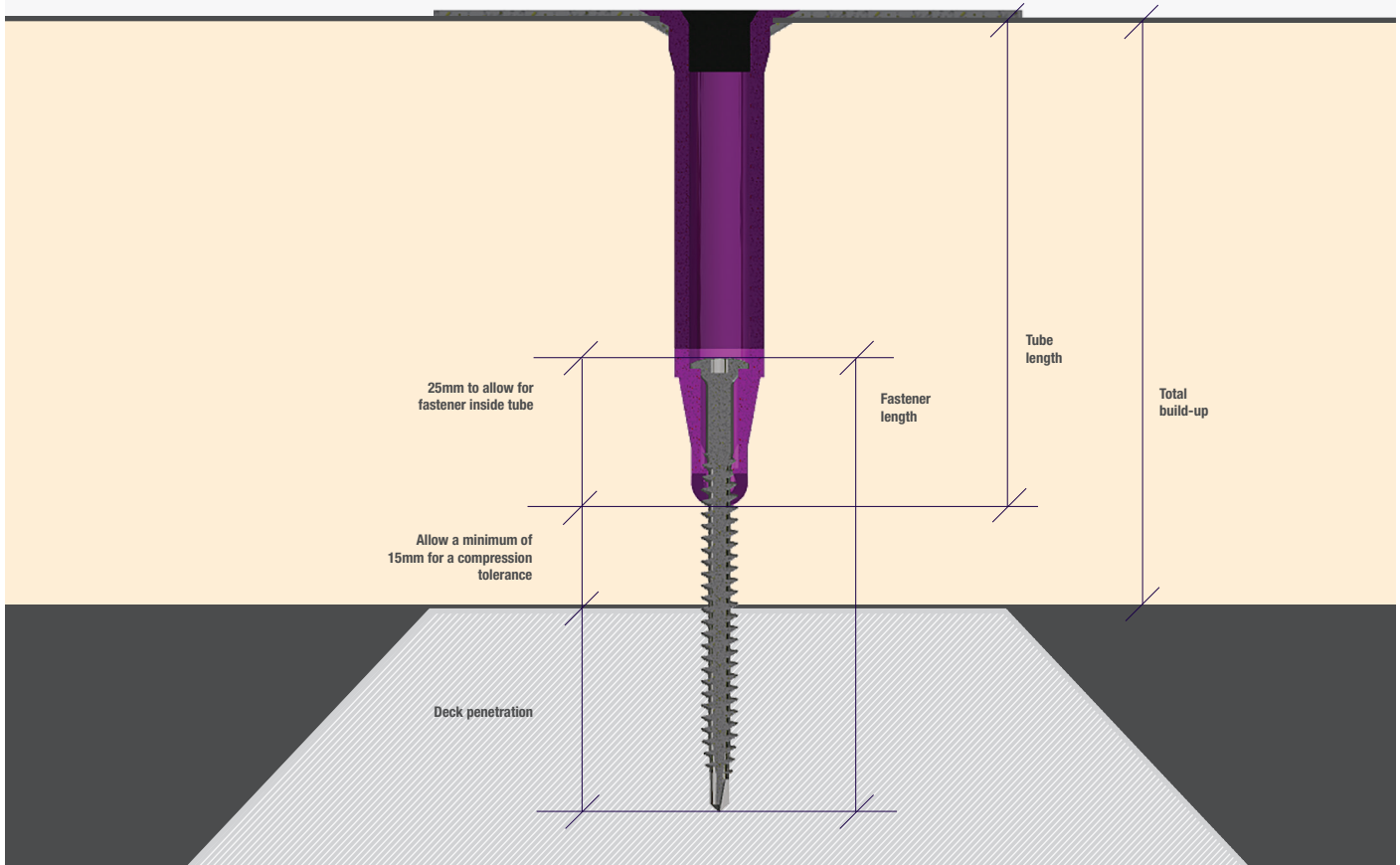
Our specification team can assist in providing NBS specifications for specific projects, whilst our customer services team can answer questions regarding the usage or ordering of Fixfast products.

If you have any queries regarding our products or services then please do contact our customer services team on 0800 304 7616 or by emailing sales@fixfast.com.

The SureFast® fasteners have been designed to fix to various different substrates. The diagram below and the table on page 4 detail which tube and fastener should be used. If you require assistance please contact our customer service team.

SureFast Tube and Fastener Selection Diagram

25mm to allow for fastener inside tube

Allow a minimum of 15mm for a compression tolerance

Deck penetration

Fastener length

Tube length

Total build-up

| Application	Minimum Penetration / Embedment
Steel decking	15mm through underside
Plywood	18mm minimum thickness 12mm through underside
Timber decking	25mm minimum thickness 12mm through underside
Timber joists	35mm embedment
Structural concrete	25mm embedment

Sika Trocal Type S Selector Chart

Tube and fastener selector chart to aid in selecting the correct products to suit various applications.

Insulation Thickness	Tube Length	Drive Bar Length	Steel Deck			Concrete		Plywood		
			SF-RS-5.8	SF-RS-SSA4-4.8	SF-RS-HCR	SF-RS-6.1	SF-RS-SSA4-6.1	SF-RS-5.8	SF-RS-SSA4-4.8	SF-RS-HCR
60	40	150	65	60	60	75	80	75	80	80
70	40	150	75	80	80	85	120	85	100	
80	40	150	85	80	80	100	120	95	100	
90	75	150	55	60	60	75	80	75	80	80
100	75	150	65	80	80	75	80	85	80	80
110	75	150	75	80	80	85	120	95	100	
120	100	150	65	60	60	75	80	75	80	80
130	100	150	75	80	80	85	80	85	100	
140	125	200	55	60	60	75	80	75	80	80
150	125	200	65	80	80	75	80	85	80	80
160	125	200	75	80	80	85	120	95	100	
170	150	200	65	60	60	75	80	75	80	80
180	150	200	75	80	80	85	80	85	100	
190	150	200	85	80	80	100	120	95	100	
200	150	200	95	100		100	120	105	120	
210	150	200	105	100		125	120	115	120	
220	150	200	115	120		125	120	125	160	
230	150	200	125	120		150		150	160	
240	150	200	150	160		150		150	160	
250	150	200	150	160		150		175	160	
260	150	200	150	160		175		175	200	
270	150	200	175	160		175		175	200	
280	150	200	175	200		200		200	200	
290	150	200	200	200		200		200	200	
300	150	200	200	200		200		250		
310	150	200	200	200		225		250		
320	150	200	250			225		250		
330	150	200	250			250		250		
340	150	200	250			250		250		
350	150	200	250			250		300		
360	150	200	250			275		300		
370	150	200	300			275		300		
380	150	200	300			300		300		
390	150	200	300			300		300		
400	150	200	300			300				

Sika Trocal Type S disc fixing with tubes

Use SureFast® tube washer low profile with SF-TLP plug.
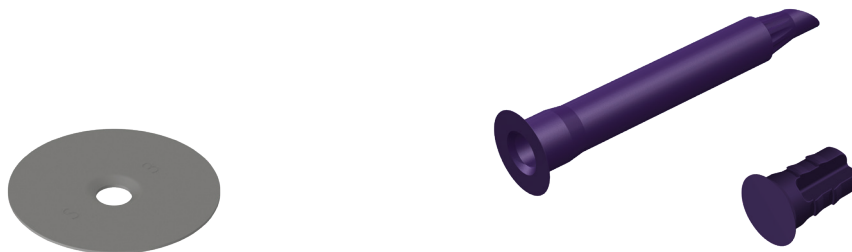
The SF-TLP Tube is compatible with the S3 Trocal disc supplied by Sika.

Product Code	Minimum build up (mm)	Tube length (mm)
SF-TLP x 40	55	40
SF-TLP x 75	90	75
SF-TLP x 100	115	100
SF-TLP x 125	140	125
SF-TLP x 150	165	150

Sika Trocal Type S fasteners for steel & timber decks

Use SureFast® roofing screw SF-RS-5.8.

Refer to SureFast® Selector chart on page 4.
The fastener is compatible with the SF-TLP tube. It can also be used
for fixing Trocal metal.
Use Torx TX25.
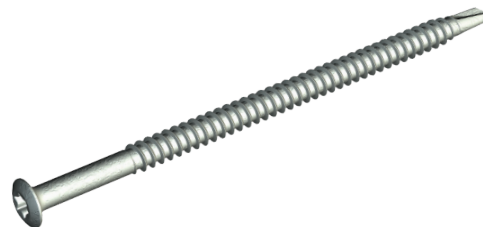
Product Code	Drilling capacity into steel
SF-RS-5.8 x 40	2 x 1.0mm
SF-RS-5.8 x 55	2 x 1.0mm
SF-RS-5.8 x 65	2 x 1.0mm
SF-RS-5.8 x 75	2 x 1.0mm
SF-RS-5.8 x 85	2 x 1.0mm
SF-RS-5.8 x 95	2 x 1.0mm
SF-RS-5.8 x 105	2 x 1.0mm
SF-RS-5.8 x 115	2 x 1.0mm
SF-RS-5.8 x 125	2 x 1.0mm
SF-RS-5.8 x 150	2 x 1.0mm
SF-RS-5.8 x 175	2 x 1.0mm
SF-RS-5.8 x 200	2 x 1.0mm
SF-RS-5.8 x 250	2 x 1.0mm
SF-RS-5.8 x 300	2 x 1.0mm

Sika Trocal Type S fasteners for concrete decks

Use SureFast® roofing screw SF-RS-6.1.
5mm pilot hole required.
A site pull test may be required.
Refer to SureFast® selector chart on page 4.
The above fastener is compatible with the SF-TLP Tube or can be used with the S1 Trocal disc supplied by Sika. It can also be used for fixing Trocal metal.
Use Torx TX25.

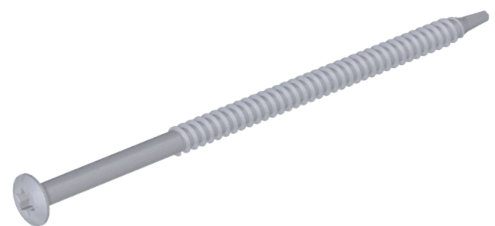| Product Code |
| --- |
| SF-RS-6.1 x 30 |
| SF-RS-6.1 x 50 |
| SF-RS-6.1 x 75 |
| SF-RS-6.1 x 85 |
| SF-RS-6.1 x 100 |
| SF-RS-6.1 x 125 |
| SF-RS-6.1 x 150 |
| SF-RS-6.1 x 175 |
| SF-RS-6.1 x 200 |
| SF-RS-6.1 x 225 |
| SF-RS-6.1 x 250 |
| SF-RS-6.1 x 275 |
| SF-RS-6.1 x 300 |

Sika Trocal Type S Stainless Steel fastener for steel & 18mm ply/OSB decks

Use SureFast® roofing screw stainless SF-RS-SSA4-4.8.

Refer to SureFast® selector chart on page 4.
The above fastener is compatible with the SF-TLP Tube or can be used with the S1 Trocal disc supplied by Sika. It can also be used for fixing Trocal metal.
Use Torx TX25.

Product Code	Drilling capacity into steel
SF-RS-SSA4-4.8 x 40	2 x 1.0mm
SF-RS-SSA4-4.8 x 60	2 x 1.0mm
SF-RS-SSA4-4.8 x 80	2 x 1.0mm
SF-RS-SSA4-4.8 x 100	2 x 1.0mm
SF-RS-SSA4-4.8 x 120	2 x 1.0mm
SF-RS-SSA4-4.8 x 160	2 x 1.0mm
SF-RS-SSA4-4.8 x 200	2 x 1.0mm

Sika Trocal Type S Stainless Steel fastener for concrete decks

Use SureFast® roofing screw Stainless A4/316.
5mm pilot hole required.
A site pull-test may be required.
Compatible with the SF-TLP tube.
Use Torx TX25.

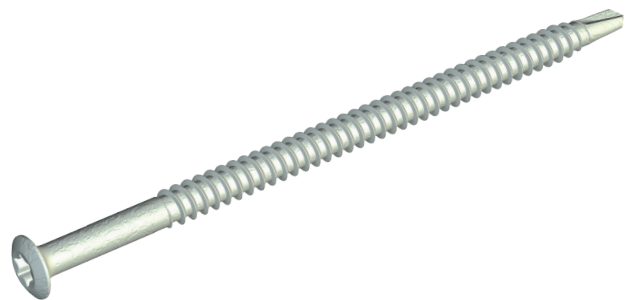| Product Code |
| --- |
| SF-RS-SSA4-6.1 x 50 |
| SF-RS-SSA4-6.1 x 80 |
| SF-RS-SSA4-6.1 x 120 |

Sika Trocal Type S High Corrosion Resistant Stainless Steel for aluminium & timber decks

Use SureFast® roofing screw HCR.

Compatible with the SF-TLP tube.
Use Torx TX25.

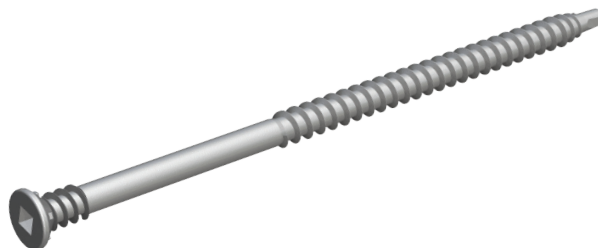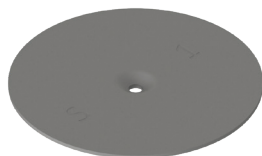| Product Code	Drilling capacity into aluminium
SF-RS-HCR-5.8 x 60	2 x 0.7mm
SF-RS-HCR-5.8 x 80	2 x 0.7mm

Sika Trocal Type S fasteners for steel and timber decks

Use SureFast® roofing screw SF-RS-CL-5.2.
The head design provides an unobtrusive finish when fixing Trocal metal.
Drilling capacity in steel 2 x 1.0mm.
Use Robertson square drive No.2.

This fastener is compatible with the S1 Trocal disc supplied by Sika.

Product Code	Build up (mm) in 0.7mm steel deck	Build up in 18mm ply/OSB
SF-RS-CL-5.2 x 25	0 - 10	n/a
SF-RS-CL-5.2 x 40	0 - 25	0 - 10
SF-RS-CL-5.2 x 55	20 - 40	15 - 25
SF-RS-CL-5.2 x 75	30 - 60	25 - 45
SF-RS-CL-5.2 x 85	40 - 70	35 - 55
SF-RS-CL-5.2 x 95	38 - 80	33 - 65
SF-RS-CL-5.2 x 105	46 - 90	40 - 75
SF-RS-CL-5.2 x 115	46 - 100	40 - 85
SF-RS-CL-5.2 x 125	56 - 110	50 - 95
SF-RS-CL-5.2 x 150	56 - 135	50 - 120
SF-RS-CL-5.2 x 175	81 - 160	75 - 145
SF-RS-CL-5.2 x 200	106 - 185	100 - 170
SF-RS-CL-5.2 x 250	156 - 235	150 - 220
SF-RS-CL-5.2 x 300	206 - 285	200 - 270

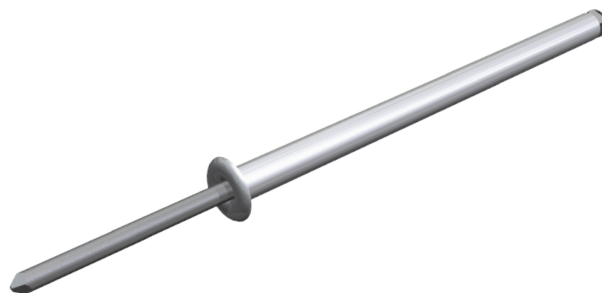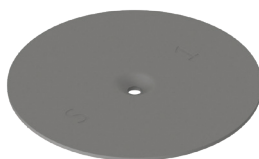## Sika Trocal Type S fastener for difficult substrates

Use SureFast® peel rivet.
7.0mm clearance hole required.
A site pull test may be required.

The fastener is compatible with the S1 Trocal disc supplied by Sika.
It can also be used for fixing Trocal metal.

Product Code	Build up (mm)
SF-RIV-6.3 x 50	25
SF-RIV-6.3 x 100	75
SF-RIV-6.3 x 125	100
SF-RIV-6.3 x 150	125
SF-RIV-6.3 x 175	150
SF-RIV-6.3 x 200	175
SF-RIV-6.3 x 250	225

FloDrain.
Stainless steel rainwater outlets for all flat roofing projects.
Light grey PVC flange - dark grey also available.

Product Code	Spigot size OD (mm)	To suit pipe size (mm/in)*	O-ring diameter (mm)	Membrane type	Membrane size (mm)	Spigot length (mm)
FO-FLO-40-PVC LT GREY	40	45-48 / 2	4.5	Light Grey PVC	350 x 350	400
FO-FLO-50-PVC LT GREY	50	58-64 / 2	8			400
FO-FLO-50/600-PVC LT GREY						600
FO-FLO-62-PVC LT GREY	62	69-73 / 3	6			400
FO-FLO-62/600-PVC LT GREY						600
FO-FLO-70-PVC LT GREY	70	76-80 / 3	6 / UF-3*			400
FO-FLO-75-PVC LT GREY	75	82-95 / 3	8/12			400
FO-FLO-75/600-PVC LT GREY						600
FO-FLO-90-PVC LT GREY	90	100-108 / 4	10			400
FO-FLO-95-PVC LT GREY	95	103-109 / 4	8 / UF-4*			400
FO-FLO-95/600-PVC LT GREY						600
FO-FLO-110-PVC LT GREY	110	120-128 / 4	10			400
FO-FLO-110/600-PVC LT GREY						600
FO-FLO-125-PVC LT GREY	125	132-137 / 5	7			400
FO-FLO-145-PVC LT GREY	145	150-157 / 6	7 / UF-6*			
FO-FLO-160-PVC LT GREY	160	170-178 / 6	10			

* Where outlet is inserted into existing pipe in refurbishment situations.
The FO-FLO-70, 95 and 145 can be used in conjunction with the UF seal – please enquire for details.
The FO-FLO-75, 110 and 160 can be used for new-build applications with coupling or downpipe connector.

ParaDrain.
Stainless steel rainwater outlets specifically designed for use in through-wall applications or parapets.
Light grey PVC flange - dark grey also available.

| Product Code	Spigot size OD (mm)	Membrane type	Membrane size (mm)	Spigot length (mm)
FO-PARAPET-50-LT GREY	50	PVC	500 x 500	400
FO-PARAPET-75-LT GREY	75			
FO-PARAPET-110-LT GREY	110			
FO-PARAPET-50/600-LT GREY	50			600
FO-PARAPET-75/600-LT GREY	75			
FO-PARAPET-110/600-LT GREY	110			

Sika Trocal Type S Leafguards

Universal Leafguard.
For use with FarBo FloDrain rainwater outlets, to prevent debris blocking the outlet.
Stainless Steel.

Product Code	To suit pipe size (mm)	Guard size (mm)	Height (mm)	For use with
FO-UG-210	50-160	210 x 210	45	FloDrain (with exception of FO-FLO-40) DuoDrain

Parapet Leafguard.
For use with FarBo ParaDrain rainwater outlets, to prevent debris blocking the outlet.
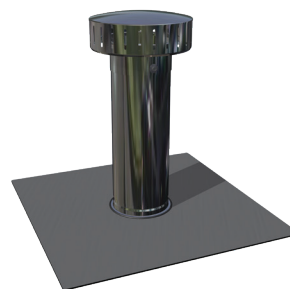Stainless Steel.
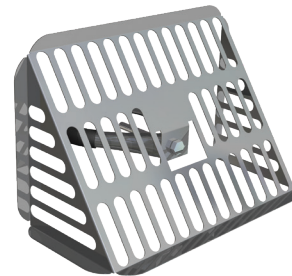
Product Code	To suit pipe size (mm)	Guard size (mm)	For use with
FO-PG-225	50-110	225 x 100 x 140	All ParaDrain outlets

Stainless steel vent pipe cover.

Light grey PVC flange - dark grey also available.

Product Code	To suit vent pipe	Diameter of internal pipe (mm)	Diameter of outer pipe (mm)	O-ring seal diameter (mm)	Membrane attachment
RM-VENT-75-PVC LT GREY	3"	58	95	10	Light grey PVC
RM-VENT-110-PVC LT GREY	4"	87	125	8	
RM-VENT-160-PVC LT GREY	6"	145	182	5	
RM-VENT-250-PVC LT GREY	4"	87	250	8	

RyMar Vent pipe covers - insertion model.
Stainless Steel.

Light grey PVC flange - dark grey also available.

Product Code	Pipe diameters (mm)	O-ring seal diameter (mm)	Membrane attachment	To suit vent pipe OD (mm)	To suit vent pipe ID (mm)
RM-IMVENT-75-PVC LT GREY	63	10	Light Grey PVC	75	70-79
RM-IMVENT-110-PVC LT GREY	90	10		110	98-106
RM-IMVENT-160-PVC LT GREY	145	5		160	150-153

RyMar Cable Ducts.

Product Code	Base dia (mm)	Duct dia (mm)	Flange material	Pipe material	Duct height (mm)
RM-CD 75 PB PVC LT GREY	330 x 330	75	PVC membrane	PVC	350
RM-CD 75 SB PVC LT GREY	330 x 330	75	PVC membrane	Stainless steel	350
RM-CD 110 PB PVC LT GREY	330 x 330	110	PVC membrane	PVC	380
RM-CD 110 SB PVC LT GREY	330 x 330	110	PVC membrane	Stainless steel	380

TX25 Drivebar

One-piece drivebar for all fasteners except SF-RS-CL-5.2.

Product Code: 50-TX25

2SQ Drivebar

One-piece drivebar for SF-RS-CL-5.2 fasteners.

Product Code: 50-2SQ

TX25 Drivebar

One-piece drivebar for SureFast fasteners.

Product Code: 150-TX25, 200-TX25, 300-TX25

Drill Extender

Drill extender for use in conjunction with STOPP drills.

Product Code: DRILL EXTENDER - 500

STOPP Drills

Masonry drill with coring and depth stop feature for exact pilot hole drill depth. Must be used in conjunction with Drill Extender.

Product Code: STOPP DRILL

Many other tools and accessories are available.

Please see the current Fixfast Product Directory, go to **www.fixfast.com**, or ask the Fixfast customer service team.

Technical Data

SureFast® Tube Washers	
Material	High quality virgin polypropylene
Pull-over value (fastener to tube washer connection).	
Fastener	Characteristic value
SF-TLP	1.55 kN

SF-RS-5.8 SureFast® Fasteners	
Material	Steel SAE1022 Case hardened
Coating	Multiple layer organic
Drilling Capacity	2 x 1.0mm S275 steels
Pull-out Values (axial load resistance)	
Substrate	Characteristic value
0.7mm Steel	1.43kN
0.9mm Steel	1.93kN
1.2mm Steel	2.87kN
18mm ply	2.10kN
18mm OSB	1.58kN

SF-RS -6.1 SureFast® Fasteners	
Material	Steel SAE1022 Case hardened
Coating	Multiple layer organic
Pull-out Values (axial load resistance)	
Substrate	Characteristic value
Concrete C25/30	1.98kN
Concrete C35/40	2.24kN

SF-RS-CL-5.2 SureFast® Fasteners

Material	Steel SAE1022 Case hardened
Coating	Multiple layer organic
Drilling Capacity	2 x 1.0mm S275 steel

Pull-out Values (axial load resistance)	
Substrate	Characteristic value
0.7mm Steel	0.94kN
0.9mm Steel	1.47kN
1.2mm Steel	2.05kN
18mm ply	2.01kN
18mm OSB	1.52kN

SF-RS-SSA4-4.8 SureFast® Fasteners

Material	1.4401 stainless steel (316M) with carbon steel case hardened welded point
Coating	Organic
Drilling Capacity	2 x 1.0mm S275 steel

Pull-out Values (axial load resistance)	
Substrate	Characteristic value
0.7mm Steel	1.08kN
0.9mm Steel	1.45kN
1.2mm Steel	2.24kN
18.0mm Ply	1.77kN
18.0mm OSB	1.37kN

SureFast® RIV Peel Rivets

Rivet Body	Aluminium alloy (ALMG 3.0/5.0
Rivet Mandrel	Carbon Steel - zinc plated - CR VI free

Fastener Data

+ All dimensions are subject to manufacturing tolerances.

+ Performance values are tested and calculated according to Eurocode procedures and appropriate safety factors should be applied in any calculations using these values.

Fastener Selection

+ Recommended fastener lengths are calculated using standard tolerances for the fasteners and the combination of materials in the build-up.

+ If there is distortion in the supporting construction, or other non-standard application detail, longer fasteners may be necessary than those shown. Always check the actual circumstances before deciding on a particular length.

Further Assistance

+ For any enquiry, or to discuss your requirements with someone knowledgeable, call the Fixfast customer service team on **0800 304 7616**.

+ Full literature is available for the Fixfast range, or visit **www.fixfast.com**

+ Other performance data may be available on request. For more unusual applications, tests can be carried out in our in-house technical centre to provide the necessary data.

+ Site visits are also possible, particularly for pull-out performance into new build concrete, decks and refurbishment projects. Please ask for a Site Visit Request form if you think this service would be useful.

+ CAD files of fasteners are available on request for inclusion in drawings.

The information contained in this document is based on the specification of the Sika Trocal system and Fixfast's product data. It is provided in good faith but Fixfast cannot be held liable for any errors. Performance is dependent on adherence to the conditions and instructions contained in Fixfast's Technical Data Sheets for the products shown. Performance values should be approved by a qualified engineer, and Fixfast recommend preliminary tests for any application where variation is possible in the materials or substrates involved.

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